

A SPATIAL CHIROGRAPHIC SIGN READER

ABSTRACT

[0071] The present invention discloses spatial tracking of writing for interpretation of writing motion using three-dimensional position sensors to identify signs, symbols, or glyphs made by a writing stylus in real time. The present invention discloses an elongated pointing device capable of measuring angular directions in a plane and true geometrical distance measurement by tracking radial distance along a ray such that true Cartesian positions in the plane are capable of being tracked. A two-dimensional true geometry tracker may be applied twice. A first time to span the X-Y plane and then again on an orthogonal axis ensuring span in a three-dimensional volume. The tracker may form spherical or cylindrical spatial coordinates and may transform coordinates to Cartesian font coordinates. The present invention also discloses a platform capable of mounting the device for spatial tracking of a stylus. A flat face of the platform may define a surface and volume where a receptacle may engage the stylus and may be actuated by a writer. Sensors on a boom permit two rotation axes to track the radial, polar, and altitude coordinates into three-dimensional (3-D) points and determine dynamic state variables associated with the stylus.